

**BOARD OF SUPERVISORS  
ACTION ITEM**

**SUBJECT:** FINANCE/GOVERNMENT SERVICES AND OPERATIONS  
COMMITTEE REPORT: Resource Requirements for the  
Enterprise Resource Planning (ERP) System

**ELECTION DISTRICT:** Countywide

**CRITICAL ACTION DATE:** December 4, 2013

**STAFF CONTACTS:** Ben Mays, Dept. of Management and Financial Services  
Wendy Wickens, Dept. of Information Technology  
Penny Newquist, Dept. of Management and Financial Services

**RECOMMENDATIONS:**

**Committee:** On November 25, 2013 the Finance/Government Services and Operations (FGSO) Committee voted 4-0-1 (Chairman York absent) to recommend the Board of Supervisors appropriate unallocated FY 2013 General Fund balance as follows: a) \$1,679,999 for Phase 1 Enterprise Resource Planning (ERP) project requirements; b) \$341,876 for 6.00 FTE in the Department of Management and Financial Services and \$62,717 for 1.00 FTE in the Department of Information Technology for ongoing operational, maintenance and technical support of the various modules implemented in Phase 1 of ERP, as well as modules to be implemented in Phases 2 and 3 of ERP; c) \$444,981 to initiate Phase 2 start-up activities; and d) \$7,036,333 for an ERP Implementation Contingency, wherein the funds may only be released after review and approval of the Finance/Government Services and Operations Committee. The committee further recommended that the Board of Supervisors authorize the Purchasing Agent to increase the contract award authority to AST by \$3,516,355, for a total of \$24,566,419. The committee further recommended that staff present to the Finance/Government Services and Operations Committee monthly status reports based on cost, schedule and technical milestones, with associated variances.

**Staff:** Staff concurs with the Committee's recommendation.

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During the November 12, 2013 meeting of the Finance/Government Services and Operations (FGSO) Committee, a special meeting was requested for further consideration of this item, due to the tight timeframe by which a decision was required regarding funding and timing for the kick-off of Phase 2 of the ERP. In addition, the FGSO Committee requested additional information on project milestones and funding deadlines for Phase 2 (Attachment 1), as well as an explanation of the benefits of the ERP (Attachment 2). In addition to preparing Attachments 1

and 2, staff added content throughout the body of this item, received a recommendation from the Core Financial Systems Steering Committee (see below), and negotiated a \$393,001 cost reduction for Analytics licensing—reducing total Phase 1 and Phase 2 costs to \$9,387,592.

The Core Financial Systems Steering Committee (consisting of the Treasurer; the Commissioner of Revenue; the Deputy County Administrator; the Director of Management and Financial Services; the Director of Information Technology; the Assistant School Superintendent for Business and Financial Services; the Assistant School Superintendent of Personnel Services; and the Assistant School Superintendent of Technology Services) recommended to the County Administrator that Phase 2 implementation be delayed until a further review and assessment of organizational needs and requirements for the Human Resources and Payroll systems can be completed and that funding for Phase 2 be placed in a contingency fund until that review is completed. The County Administrator, School Superintendent and both the representatives from the finance functions in the County and schools are not in support of this option. The resulting delay would add an estimated \$1,000,000 to the project cost. Resource needs identified for Phase 1 and increased contract award authority would still be required. The Steering Committee subsequently reversed that recommendation and approved the existing option.

At the November 25, 2013 special meeting, the FGSO Committee voted 4-0-1 (York absent) to adopt staff's recommendation (Option 1). The committee further recommended that that staff present to the FGSO Committee monthly status reports based on cost, schedule and technical milestones, with associated variances. Staff has subsequently identified additional services to be provided by AST not reflected in the FGSO item and corrected the award authority increase request accordingly to \$3,876,595, for a new contract amount of \$24,926,659. Funding for this contract was previously approved and appropriated by the Board of Supervisors, and is not part of the funding requested in this item.

**BACKGROUND:** In 2008 and 2009 County staff undertook an evaluation of the critical financial systems for Loudoun County and the Loudoun County Public Schools. Digicon was hired to conduct an assessment of the financial systems. On January 21, 2009 an Information Item assessing the condition of the County's core financial systems was presented to the Board of Supervisors. The Digicon Assessment report dated November 2008 concluded as follows:

*“At this point, the batch interfaces of current systems have become so numerous and complex that users report processing errors as a frequent problem. Architectural constraints also make it difficult to interface these systems with modern web-based applications. Most of the systems have little or no technical documentation and must rely on the experience of support staff that is fast approaching retirement age.*

*The current system architecture has not been widely employed for nearly two decades; therefore, the skills necessary to support these systems are not readily available in the open market. Most importantly, the users of these systems have unequivocally stated that the systems are not supporting current business processes without “Herculean” efforts by staff members such as manual workarounds using MS Access databases and MS Excel spreadsheets.*

*The general findings indicate that the current Financial, Human Resources, and Tax Revenue business systems being employed by the County should be replaced by ERP and other COTS systems. Digicon recommends that the Tax Revenue systems be replaced first, followed by the Financial system, and lastly the Human Resources systems.*

*The remainder of FY09 should be devoted to creating and publishing an RFP, selecting the appropriate replacement systems, and planning a multi-year implementation schedule to minimize the financial impact to the County's budget in any one year."*

### **Replacement of Legacy Systems (ERP, ITS & CAMA)**

Based on this report, staff developed and issued a Request for Proposal (RFP) to replace its current legacy systems. That RFP consisted of the following three initiatives. These initiatives could be awarded in individual or combined contracts.

- **Initiative #1 ERP**—replaces the financial and Human Resources systems used by County Government and Loudoun County Public Schools.
- **Initiative #2 Integrated Taxation System (ITS)**—replaces the taxation system used by the Commissioner of the Revenue and Treasurer's offices.
- **Initiative #3 Computer Aided Mass Appraisal (CAMA)**—replaces the appraisal and Land Use systems used by the County Assessor. Because the CAMA system was in dire need of replacement, priority was placed on this system.

A Steering Committee comprised of senior leadership from the County, Schools, Treasurer and Commissioner of the Revenue provided guidance for the assessment and implementation of the project. Membership of the Steering Committee has changed as the scope of development has changed. The Board of Supervisors allocated \$25,000,000 for the Core Financial Systems (Enterprise Resource Planning, Integrated Taxation System and Computer Aided Mass Appraisal and Land Use System (CAMA) as part of their FY2010 budget. Staff requested and received an additional \$5,000,000 from Fund Balance on FY2011 when it became apparent the original project budget was insufficient for the three system implementations. In addition, in April 2013 an additional \$2,000,000 was allocated to the project budget from remaining funds that had been appropriated to the Field Data Collection contract that was terminated for convenience. This made the total project budget \$32,098,088 for the three initiatives.

**Contracts for Project Management.** On January 9, 2011 the Board of Supervisors authorized the Purchasing Agent to award a contract for project management and advisory services for the implementation of financial systems to Visionary Integration Professionals (VIP) in the amount of \$1,392,469. In addition to this contract, a separate contract for project management and advisory services was awarded to Vivad Technologies in the amount of \$101,750 to augment the project management and advisory services when it became apparent additional resources were needed for the three projects. Prior to this time, the County had hired one project manager from VIP who was assigned to all three initiatives. The VIP Project Manager left the project so staff decided to expand the Vivad Technologies contract to take on all project management and advisory services to ensure continuity and stability. Therefore the Vivad Technologies contract was amended and the Board of Supervisors awarded a two-year contract in the amount of \$1,151,875 on January 16, 2013.

**Contract for Initiative #3 CAMA (Feb 2011).** On February 15, 2011, the Board of Supervisors authorized the Purchasing Agent to negotiate and award a four-year contract for an Integrated Computer Aided Mass Appraisal (CAMA) and Land Use System for the Office of the County Assessor to Tyler Technologies in the amount not to exceed of \$1,898,800 utilizing Tyler Technologies as the hosted solution. The contract for this work was executed on February 17, 2011.

**Contract for Initiative #2 ITS (Sept 2011).** On July 19, 2011 the Board of Supervisors authorized the Purchasing Agent to negotiate and award a five-year contract for an Integrated Taxation System for the Commissioner of Revenue and the Treasurer's office to PCI, LLC in the amount of \$4,234,259. The contract for this work was executed on September 30, 2011.

**Contract for Initiative #1 ERP (Nov 2011).** On November 2, 2011, the Board of Supervisors authorized the Purchasing Agent to negotiate and award a three year contract for an Enterprise Resource Planning (ERP) System for Loudoun County Government and Loudoun County Public Schools (LCPS) to Applications Software Technology Corporation (AST)/Oracle, including their third party providers in the amount of \$21,050,064. This contract included implementation of all three phases. The contract for this work was executed on November 30, 2011. Implementation of Phase 1 was started in January 2012 and went live on July 1, 2013. During that time several amendments to the contract were required to cover work previously not identified, customizations and additional post production support. Those changes totaled \$4,554,997. Staff has since identified an additional \$1,235,240 of contractual work to be completed by AST. In this item, staff requests authorization to increase the contract award authority accordingly, using funds already appropriated. Since the contract contingency amount of \$1,913,642 is used to offset the \$5,790,237 increase, the new contract total is \$24,926,956. The requested increase in contract award authority is the same for all three options.

### **ERP Implementation**

Initiative #1 Enterprise Resource Planning (ERP) System project consists of three (3) Phases:

#### **Phase 1: Financials, Procurement, Grants and Document Management**

General Ledger, Accounts Payables, Accounts Receivables, Fixed Assets, Purchasing, Cash Management, Projects/Grants, and Hyperion Budgeting, iProcurement, iExpenses, Inventory & Document Management Integration.

#### **Phase 2: Human Capital Management (HCM) Applications**

HR, Self Service HR, Advanced Benefits, Payroll, OTL, SSHR, iRecruitment, Learning Management, Performance Management, Compensation Workbench & Document Management Integration

#### **Phase 3: Advanced Procurement**

iSupplier, Procurement Contracts, Services Procurement, Sourcing & Document Management Integration

**Phase 1** implementation began January 23, 2012, with a planned duration of 18 months plus one month of post-production support, with a planned Go Live date of July 1, 2013. During this phase of the project, the major financial systems of Loudoun County and LCPS were replaced

including the replacement of FAMIS with Oracle Financials. From the onset of the project, the lack of stable project management from contracted vendors and inadequate internal staffing delayed the project. The consultants' management of the overall program (replacing 3 legacy systems) and management of the ERP project changed hands excessively. In the course of 12 months, there were four different project managers for the ERP project. *Lessons Learned: The initial assumption that one contracted project manager could manage all three phases was grossly insufficient. As Phase 2 and Phase 3 implementations go forward concurrently the current contracted management solution should be adequate.*

Staff in the Department of Management and Financial Services (MFS) was assigned responsibility for implementing the 12 different modules, in addition to the existing full workload. Staffing in the divisions responsible for Phase 1 implementation has been stagnant at 46.0 FTEs since FY 2010. This includes only one position for the project—a Supply Assistant added as part of the iProcurement module, after the strong recommendation of the systems integrator. Other concurrent projects (such as, the extension of the metro Silver Line to Loudoun County) have also required extensive effort and time from MFS staff to analyze and develop options for financing the Silver Line and other major transportation projects. The lack of adequate resources was a constant and costly challenge for Phase 1 implementation. Staffing resource shortages led to delayed decision-making. Staff for both the County and Schools worked excessive hours for extended periods to accomplish their daily work and to support the ERP implementation. The initial staffing requirement indicated a 30% time commitment from staff assigned to the project. The reality was that at least 70% to 100% of a staff position was required. Staff in Procurement and Finance worked 12 to 14 work days and on weekends for no less than 6 months and generally did not take leave. Overreliance on those particular staff, despite their dedication and extra effort, led increasingly, over time, to delays in implementation and to bottlenecks for the other modules currently being implemented. There is no question that this shortage of initial dedicated staff added significantly to the cost of the Phase 1 implementation and to the sum of the delays and issues still under resolution. *Lessons Learned: The initial consultant recommendations that dedicated staff for the installations was required should have been followed. Additional resources were not requested to fully staff the project. Given that environment, the only alternative was for staff to work “double duty” on both regular ongoing operational assignments, and as subject matter experts responsible for implementation of the modules affecting those areas.*

One of the consequences of the bottlenecks created by inadequate staffing was the inability to transfer knowledge from the AST consultants to in-house staff. As time to complete the project became more and more compressed, tasks critical to go live overtook other important tasks. “Knowledge transfer” planned to occur between the AST implementation staff and the staff of Information Technology and the Subject Matter Experts within Management and Financial Services did not occur at the level and in the expected time frame. The time in which such transfer was originally scheduled to take place, was instead entirely consumed by simply catching up on the module implementation schedule. As a result, in April 2013, the Board of Supervisors approved the addition of four (4) contract technical consultants to provide Oracle Phase 1 post production support, in addition to resources for Oracle Phase 2 implementation support, process support using Hyperion (budget preparation), and developing reports in Oracle to the Department of Information Technology (DIT). In spite of the challenges, Phase 1 went

live July 1, 2013 as planned, primarily due to the dedication and extraordinary additional hours staff worked. Staff continues to work through issues and changes resulting from the implementation. Because of the extreme workload and the inability to complete the transfer of knowledge and understanding of the new system prior to Go-Live on July 1, AST consultant support had to be extended through December 2013. The estimated cost associated with both the additional consulting staff, the extension of existing AST staff, and some of the late changes to the system totaled around \$3 million. *Lessons Learned: A significant amount of Post “Go-Live” support for implementing an ERP is required. The County, having never installed such a comprehensive system, did not have an appreciation of the scale of support that was required. This was exacerbated by the failure of the “knowledge transfer” portion of the work plan. A large portion of the funds under request deal specifically with Post “Go-Live” support for both Phase 1 and Phase 2.*

**Phase 2** was originally scheduled to begin on April 22, 2013. But due to the extreme workload associated with Phase 1 and the continued anticipated workload for Phase 1 Post Go-Live, employee burnout, the overlap of staff involved in Phase 1 and Phase 2 and the need to adapt to changed business processes, the project start was initially delayed to September 2013. By September 2013, it became obvious that there were still insufficient internal staff resources to both successfully complete Phase 1 implementation and to concurrently begin Phase 2 implementation. Staff was unwilling to repeat the same mistakes that had been made with the Phase 1 implementation. In response, the joint County and Schools Steering Committee placed the Phase 2 project implementation on hold. The Steering Committee asked for an evaluation of the capacity of the organization to proceed with the implementation including identifying the gaps in human and financial resources required to successfully implement Phase 2. As a result of the completed fully resourced project plan for Phase 2, lessons learned from Phase 1 implementation, and the organization’s capacity to absorb more change, it became apparent that additional resources, comprised of additional funds and FTEs, are required to proceed with Phase 2 implementation, to continue to support the post-Go Live implementation of Phase 1 and to perform the workload already assigned to staff.

Phase 3 implementation of Advanced Procurement has begun. This phase include the implementation of four modules: iSupplier, Procurement Contracts, Sourcing, Services Procurement (originally slated for Phase 3, but implemented in Phase 1) and Document Management Integration. This phase is currently adequately resourced and does not require additional resources. Upon full implementation Suppliers (Vendors) will have the ability to view purchase orders, receipts, payments, and register as a source online. Sourcing includes online bidding and evaluation including collaboration of team members involved in the bid document. Procurement Contracts will house a Standard Terms Library of contract templates and clauses used to build solicitation documents. Phase 3 will expedite the process in which vendors receive orders and payments and will allow them to submit quotes and formal bids through an online process. County staff will benefit by having all formal documents developed, evaluated and awarded through an online process.

#### **Additional Resource Needs to Complete Phase 1 and to Implement Phase 2**

Based on lessons learned from Phase 1 and a review of tasks identified in the original contract, staff identified and classified “unfunded” item. These items are required for Phase 2

implementation, as well as ongoing support required for Phase 1. Table 1 summarizes the unfunded items and shows the total cost of unfunded items by category. Attachment 1 details the components of each of the categories shown.

**Table 1. ERP Project Requirements and Staffing Costs**

<b>Unfunded Item Category</b>	<b>Phase 1</b>	<b>Phase 2</b>	<b>Estimated Total</b>
<b>Phase 2 Implementation Support</b>	\$ -	\$ 600,000	\$ 600,000
<b>Technical Development and Customizations</b>	\$ -	\$ 1,500,000	\$ 1,500,000
<b>Post Go-Live Support</b>	\$ 750,000	\$ 3,456,000	\$ 4,206,000
<b>Training</b>	\$ 105,000	\$ 605,000	\$ 710,000
<b>Reports</b>	\$ 125,000	\$ 125,000	\$ 250,000
<b>Documents Management</b>	\$ -	\$ 716,000	\$ 716,000
<b>Licensing and Maintenance</b>	\$ 699,999	\$ 301,000	\$ 1,000,999
<b>Staffing (FY 2014 Partial Year)*</b>	\$ 226,280	\$ 178,314	\$ 404,594
<b>Total Additional Resources Required for Phase 1 and Phase 2</b>	<b>\$ 1,906,279</b>	<b>\$ 7,481,314</b>	<b>\$ 9,387,593</b>

*\*Full year funding for 7.00 FTE is \$766,097.*

If the Board approves the requested \$9,387,593, the project budget would be \$41,500,000 for all three initiatives (ERP, CAMA and Taxation System). For comparison purposes, the estimated cost of implementation for Fairfax County Government and Fairfax County Schools for Financials and HR/Payroll was \$43 million. Montgomery County and Montgomery County Public Schools expended \$65 million for Financials and HR/Payroll. Keep in mind that these projects were strictly ERP implementations while Loudoun County's project budget is for the three different initiatives.

### **Positions Required For Support of the ERP**

Unfortunately, Loudoun's experience with ERP implementation is not unique. In virtually every jurisdiction that we contacted, initial estimates for cost and staff resources and the project timeline for implementation were insufficient. As an example, one of the lessons learned, from our neighboring jurisdictions and from other successful implementations, is that there is a need with new ERP systems for business analysts that are information technology-oriented already embedded within each major program activity. In discussions with other jurisdictions, staff discovered that between five and eight such positions have generally been created within the user departments. This is a distinctly different business model than has been used previously Loudoun County. In October 2013, Loudoun County Public Schools added 2.00 FTEs for Phase 1 and 2.00 FTEs for Phase 2 implementation. The County also needs staff to adequately manage the remaining issues and system needs for Phase 1, as well as to address requirements to successfully implement Phase 2. The requested positions are summarized in Table 2 and described in detail in the subsequent paragraphs.

**Table 2. Positions Required to Support ERP**

<b>Positions</b>	<b>FTEs</b>	<b>FY 2014 Personnel Cost (6mths)</b>	<b>FY 2014 Non- personnel One Time Cost</b>	<b>FY 2014 Total Cost</b>	<b>FY 2015 Full-Year Cost</b>
<b>Phase 1 Positions (MFS)</b>					
Functional Systems Manager	1.00	\$65,766	\$3,138	\$68,904	\$131,531
Functional Systems Accountant	1.00	\$49,321	\$3,138	\$52,459	\$98,641
Financial Analyst	1.00	\$49,321	\$3,138	\$52,459	\$98,641
Budget Systems Analyst	1.00	\$49,321	\$3,138	\$52,459	\$98,641
<b>TOTAL MFS PHASE 1</b>	<b>4.00</b>	<b>\$213,729</b>	<b>\$12,552</b>	<b>\$226,281</b>	<b>\$427,454</b>
<b>Phase 2 Positions (MFS)</b>					
Functional Systems Accountant	1.00	\$49,321	\$3,138	\$52,459	\$98,641
Business Analyst	1.00	\$60,000	\$3,138	\$63,138	\$120,000
<b>TOTAL MFS Phase 2</b>	<b>2.00</b>	<b>\$109,321</b>	<b>\$6,276</b>	<b>\$115,597</b>	<b>\$218,641</b>
<b>TOTAL MFS ALL PHASES</b>		<b>\$323,050</b>	<b>\$18,828</b>	<b>\$341,878</b>	<b>\$646,095</b>
Imaging Systems Analyst	1.00	\$60,000	\$2,717	\$62,717	\$120,000
<b>TOTAL Staffing Requirement</b>	<b>7.00</b>	<b>\$383,050</b>	<b>\$21,545</b>	<b>\$404,595</b>	<b>\$766,095</b>

### **Positions Required to Support Phase 1 Implementation (Financials)**

#### ***Accounting and Financial Services Division of MFS***

This Division is responsible for the timely and accurate processing and reporting of financial transactions and the ongoing management of the County's debt. This Division processes the County's accounts payable, accounts receivables, and payroll; monitors capital projects, records capital assets, and ensures that all Federal and State grant requirement are met. This division develops financial strategies to fund the capital improvement program for both the General Government and the Loudoun County Public Schools; reconciles and processes payment of countywide obligations; and ensures timely reporting of financial data to the Board of Supervisors, rating agencies and the public. Staff of this division also provides administrative and documentary support to the Board of Equalization when in session and is the main contact for all citizens appealing assessments.

In recent years, this Division has taken on significant additional new workload including development of financing options for the Silver Line extension, preparing responses for the TIFIA loan application process, and assisting with the implementation of the newly adopted HB 2313 legislation for new transportation funding. In addition, during the last 20 months this division has been directly affected by the implementation of the new Oracle Financial system. This implementation was undertaken without any significant additional staffing resources



causing existing staff to work excessive hours for a prolonged period of time often without compensation for those hours. AST consulting support has been extended in Phase 1 to provide additional support for this staff in this Division through December 2013. In addition, as a result of the implementation of the Oracle Financials a number of functional tasks previously handled by staff in the Department of Information Technology have been shifted to staff in MFS. Examples of this shift of responsibilities include system set-ups, configuration maintenance, monthly closings, report development and system troubleshooting. A number of critical functions (such as, capital project and bond accounting) are handled by a single staff person. Due to specialized needs, the organization does not have sufficient staffing to provide back-up staff trained and readily able to step in and perform the position duties should that individual become sick or be absent for a prolonged period of time. In addition, the increasing number of transportation projects requires resources to track funding and financial reporting.

**Functional Systems Manager:** This is the first of the business analyst positions that need to be embedded in the Accounting Division. This position is responsible for maintaining the Chart of Accounts and the General Ledger, establishing and maintaining security rules, cross validation and flexfield security rules, maintaining budgetary control of all modules through the General Ledger, developing reports for use by staff in departments and County Administration, establishing interfund management and setups, monthly module closing, monitoring and reconciling subledger accounting, development and maintenance of GASB ledger, providing first line support (trouble-shooting, set-ups and configuration) for County staff for the General Ledger, Fixed Assets, and Projects and Grants modules. As a result of the still rapidly increasing County population, with resulting increases in demand for services and in some cases, such as transportation, a demand for new levels of service, the County government has regularly reorganized, recombined, and transferred programs and activities between departments. Each of these transfers, while providing us with the nimbleness required of County government, requires extensive revisions to the accounting and procurement systems.

**Functional System Accountant:** This is the business analyst position for accounts payable and accounts receivable modules. This position will serve as the first-line of support (trouble-shooting, set-ups and configuration) for County-wide users of Accounts Payables and Accounts Receivables modules, monitoring and reconciling sub-ledger accounting, performing monthly closeout of modules and test necessary program changes and upgrades. This position will also serve as back up for the payroll functional systems position.

**Financial Analyst:** Provides functional first-line support Countywide for the Projects and Grants (PNG) module, analysis and maintenance of Projects and Grants funding patterns, monitoring and reconciling sub-ledger accounting, reconciliation to the General ledger. Responsible for setting up all new PNG templates providing departmental support, coordination with Schools for bond issuance accounting and reimbursement through PnG module. Compared to other jurisdictions (and the large corporations for which such ERP systems were initially developed) Loudoun has an extraordinarily large number of projects and grants at any given time. This includes the large number of operational grants within the departments, all of the projects separately identified in the capital improvement program, and the capital asset replacement plan, as well as the large number of accounts created through the County's Proffer system. This position is required to make effective use of the project and grants module. The new module will

give us far greater reporting capacity for grants capital projects proffers, etc. but those benefits, with the requirement for far more extensive workload requirements.

***Budget Analysis and Research Division of MFS***

This Division is responsible for the development, analysis, review, implementation, and monitoring of the County's operating budget. This Division conducts management analysis, coordinates and manages program performance measurement, provides fiscal impact analysis, conducts grant management and training and leads special project for the Board of Supervisors and County Administrator.

The work of the Budget Office has become increasingly complex in the last five years with the growth in number and complexity of programs operated by the County as well as the number of management analysis projects requested from the Budget Office. Budget Office staffing over the last five years has remained static as workload has grown. Technical expertise now necessitated by the switch to Oracle, specifically Hyperion, has gone beyond the level available through existing resources. In addition, the nature and frequency of budget reporting performed throughout the year has increased without an increase in staffing resources.

**Budget Systems Analyst:** This is the business analyst position supporting the budgeting module for the new ERP. This position will serve as the point of contact and subject matter expert for the ORACLE module Hyperion which is used for preparing and presenting the annual operating and capital budgets. This position maintains data within Hyperion during the budget development process, creating and maintaining reports within Hyperion for use by all departments, troubleshooting and resolving both technical and functional system issues, serving as the lead for technical budget document and program review creating and printing, creation and management of special ad hoc reports, maintenance of user security levels and hierarchies in Hyperion and the budget adjustment related to the General Ledger, development and updating of training materials as well as conducting training to department staff on the use of Hyperion including budget adjustments, provides backup support to the grants accountant in Finance, manage data and report on budget projections on a monthly and quarterly basis.

Currently, two Budget Analysts (2.00 FTE) are devoting 80% of their time working with AST consultants to create a process for developing the proposed and adopted budget documents. While the module is new for this Fiscal Year budget process, the module requires significant ongoing effort to ensure that an accurate and concise budget document is prepared this year and for future budget cycles. Numerous steps are required to bring the narrative, financial tables and performance measures together into a precise and accurate document. This module will be used for the proposed budget, the adopted budget (including the CIP) as well as quarterly performance measure reports. Without this position, one Analyst position (1.00 FTE) that would usually work with departments to build the annual budget, conduct budget reviews and analysis, monitor revenues and expenditures during the year, conduct management analysis, perform position control duties and complete special projects will be committed to managing the Hyperion Module and other Oracle driven duties (reporting out of and management of budget adjustments in the general ledger and position control in the HR module).

**Positions Required to Support Phase 2 Implementation (Human Resources/Payroll)**

**Functional System Accountant (Payroll):** This position will provide dedicated support for the implementation of the Time and Labor module of Phase 2. The position will provide first line support (trouble-shooting, set-ups, and configuration maintenance) to County staff for payroll entry and time and attendance reporting. The position will provide training and guidance to staff throughout the County regarding payroll entry and reporting. Upon the implementation of Phase 2, this position will transition into the business analyst supporting the Payroll and Time and Labor modules of the system.

**Senior Business Analyst/Senior Financial Systems Analyst:** This position supplements an existing position and is responsible for administering the technology component of General Ledger, Accounts Payable, Accounts Receivables, Fixed Assets, Purchasing, Cash Management, Projects and Grants, Hyperion Budgeting, iProcurement, IExpenses, Inventory, and Payroll and Oracle Time and Labor. In addition to supporting the implementation of Phase 2 modules, this position provides day to day support to systems end users. At this point in time, the existing senior financial systems analyst is charged with the overall management for accounting of the continuing resolution of phase 1 implementation as well as management of the Phase 2 and Phase 3 implementations. Without this position, significant bottlenecks are almost certain to occur with the Phase 2 implementation.

**Imaging Systems Analyst:** This position will provide support for the implementation of Laserfiche records management for the new modules as well as the CAMA and PCI programs. To ensure that these initiatives receive the necessary support to implement the integration a Systems Analyst is needed to provide ongoing technical support to ensure the CAMA, Tax and ERP schedules are not adversely impacted. Each of these implementations requires staff to review business processes and architect imaging solutions to best suit these business processes. Currently, the County-wide imaging system has only 2.8 FTE responsible for the day to day administration of the system, trouble-shooting issues that arise within the Laserfiche system, and implementation of these new technology projects. The imaging system has grown by over 5 million pages in the past year alone and currently, 20 County departments are using this system. The further expansion of the system to iPad and iPhone users necessitates the addition of systems support staff to provide sufficient administration of the system.

**ISSUES:** In summary, while County and School staff implemented Phase 1 of the ERP process through unsustainable levels of individual labor on the part of staff, the implementation came at a high morale and material project cost. Inadequate dedicated initial staffing and a lack of appreciation for the level of support necessary for post ‘Go-Live’ activities significantly increased the cost for the County for Phase 1. Roughly half of the funds requested are a result of these two problems. In order to successfully implement Phase 2, including completion within the proposed 15-month project schedule, and to fully operationalize the Phase 1 modules already in place, staff is recommending both additional funds and the dedicated personnel identified in this report.

**Additional Oversight:** One of the issues identified at the November 12 FGSO Committee meeting, was the idea of additional Committee/Board oversight of the ongoing ERP implementation. A possible solution would be the creation of an ERP Implementation

Contingency Fund. Similar to the Board of Supervisors existing Litigation Contingency fund, monies from that account would require Committee and or Board approval prior to use. Staff suggests that an item regarding ERP implementation be added to the standing monthly agenda of the FGSO Committee. The committee would have available the implementation plan and action steps as modeled in Attachment 1 to use as their monitoring tool. Attachment 1 lays out the project plan and milestones, the deliverable products and the potential additional cost elements projected through the end of the project.

**ALTERNATIVES:** There are three options for the Board to consider.

**Option 1: Fully Fund Phase 1 and Implement Phase 2.** This is the current staff recommendation and reflects the opinions of the County Finance staff and the school system. This option assumes that:

- a) Phase 1 Financials went live on July 1, 2013. As described in the body of the report, additional staffing and funding is required to fully operationalize and maintain the implementation for the financial modules. Cost estimate is \$1.9 million, including 4.00 FTE.
- b) Phase 2 Oracle Human Resources would begin January 1, 2014, with a Go-Live date of April 1, 2015. Cost estimate is \$7.5 million, including 3.00 FTE.
- c) Phase 3 Advanced Procurement, which began this month, is adequately resourced and will proceed.

Assuming a January 1, 2014 implementation start for Phase 2, the project plan calls for a 15 month implementation (April 1, 2015 Go Live). By proceeding with the full implementation of the ERP, the current system (Cyborg) will be replaced with a fully integrated system. Full implementation of the ERP eliminates the need for integrations between ORACLE financials and existing employee payroll and Human Resource system. In-house knowledge and experience gained from Phase 1 implementation can be utilized for Phase 2 implementation. Lessons learned are fresh and will be translated into a more effective implementation for Phase 2. Based on lessons learned from Phase 1, if requested resources are not made available, staff does not recommend this option. Absent the requested resources, it is likely that the project would face significant delays and cost overruns at the “back-end” of the schedule. As it stands, this schedule is very tight. Any delays in actually going live in April would be very disruptive to LCPS during the height of their hiring season.

**Option 2: Fully Fund Phase 1 and Delay Implementation of Phase 2 for nine months.** This option assumes that:

- a) Phase 1 Financials went live on July 1, 2013. As described in the body of the report, additional staffing and funding is required to fully operationalize and maintain the implementation for the financial module. Cost estimate is \$1.9 million, including 4.00 FTE.
- b) Phase 2 Oracle Human Resources implementation would be delayed for nine (9) months during which time an assessment of functional needs and a review of the capabilities of the County’s current HR/Payroll system would be conducted. \$7.5

million would still be set aside in a contingency account pending decision to implement Phase 2. In addition, another \$1 million would be added to the contingency in recognition of the cost of delay.

- c) Phase 3 Advanced Procurement, which began this month, is adequately resourced and will proceed.

Cyborg would continue to be utilized as an interim solution. The existing HR/Payroll system has undergone several upgrades and changes since the initial Digicon Assessment report in November 2008. Therefore, the nine month delay would afford the County the opportunity to perform an analysis of the current County and School functional requirements compared to the capabilities of the current version of the County's existing HR/Payroll system. A delay in Phase 2 implementation would allow staff time to adapt to changed business processes resulting from Phase 1 implementation and for workload to stabilize.. This option could require staff resources to implement another request for proposal process. Lessons learned from Phase 1 implementation may be lost or forgotten as time lapses. A decision on options for future hosting of ORACLE Financials and Procurement will have to be made. An estimated \$500,000 in new costs would be required for the extending the hosting agreement and consulting staff to integrate Cyborg with the ORACLE system. Staff estimates that other costs of the delay could also reach \$500,000 for a total of \$1 million. Under this option, it is possible County could find another integrated HR and payroll solution at a different cost. Delaying the implementation for nine months will extend the time in which the County and the schools will be performing double entry in the HR and payroll systems into both the existing legacy system and Oracle.

**Option 3: Fully Fund Phase 1 and Terminate Implementation of Phase 2 of the ERP.** This option assumes that:

- a) Phase 1 Financials went live on July 1, 2013. As described in the body of the report, additional staffing and funding is required to fully operationalize and maintain the implementation for the financial module. Cost estimate is \$1.9 million, including 4.00 FTE.
- b) Phase 2 Oracle Human Resources would not be implemented.
- c) Phase 3 Advanced Procurement, which began this month, is adequately resourced and will proceed.

The current Cyborg system could continue to be maintained for the short-term and be utilized for the payroll requirements of the County and Schools. This system currently performs for the County but would require integration into the ORACLE financials. This option will require staff resources to implement another request for proposal process, but would allow staff more time to acclimate to the changes brought about by the implementation of the financials. The plan to eliminate the mainframe technology may be delayed and is dependent upon plans to replace the payroll system and to integrate the HR system. Improvements in the Human Resources and payroll areas identified in the original assessment will not be achieved. Efficiencies such as elimination of paper timesheets will be lost. The new ORACLE Chart of Accounts does not match the old FAMIS chart of accounts and this will require the maintenance of the "crosswalk" tables with the need for such tables to be re-examined following every system upgrade that Oracle provides. It is likely that a rebid of Phase 2 would result in significantly higher project

costs for the County given that the current contract, bid during the depths of the recession, was bid with certain larger economies of scale in mind. Phase 3 Advanced Procurement which began November 4, 2013, would proceed and is funded within the current contract. These costs include the changes to the hosting agreement and consulting staff to integrate Cyborg with the ORACLE system. An estimated \$500,000 in new costs would be required for extending the hosting agreement and the consulting staff to integrate Cyborg with the ORACLE system. The County could also expect the cost for any future implementation to be considerably higher.

The Finance/Government Services and Operations Committee could decide not to implement ERP Phase 2. The staffing of 4.00 FTE being requested for Phase 1 would continue to be a primary necessity in order to effectively utilize the ERP modules and systems; however, the deferment of proceeding with ERP Phase 2 would eliminate the immediate need of the associated 3.00 FTE being requested.

**FISCAL IMPACT:** The total funding request of \$9,387,592 is proposed to derive from unallocated FY 2013 General Fund balance.

- **ERP Project Requirements:** The total identified funding required to complete the full implementation of Phase 1 and to provide all resources needed to complete the implementation of Phase 2 is estimated to be \$8,982,999.
- **County Staffing:** Staff proposes a FY 2014 mid-year enhancement totaling \$404,594 and a total of 7.00 FTE. Phase 1 costs include \$257,640 and 4.00 FTE to provide operational, maintenance and technical support for the modules already implemented and Phase 2 costs of \$146,956 and 3.00 FTE for the implementation of modules and the ongoing support of the associated modules. The full year cost for FY 2015 is estimated to be \$766,097 and, if the FY 2014 mid-year enhancement is approved, would be included in the FY 2015 base budget.

There are sufficient funds currently appropriated for the requested contract award authority increase of by \$3,876,595 for a total contract amount of \$24,926,659 for the contract with AST.

**DRAFT MOTIONS:**

1. I move the recommendation of the Finance/Government Services and Operations Committee that the Board of Supervisors direct staff to prepare budget adjustments which appropriate unallocated FY 2013 General Fund balance as follows:
  - a. \$1,679,999 for the Phase 1 Enterprise Resource Planning (ERP) project requirements;
  - b. \$341,876 for 6.00 FTE in the Department of Management and Financial Services and \$62,717 for 1.00 FTE in the Department of Information Technology for ongoing operational, maintenance and technical support of the various modules implemented in Phase 1 of ERP as well as modules to be implemented in Phases 2 and 3 of ERP;
  - c. \$444,981 for Phase 2 start-up activities; and
  - d. \$7,036,333 in an ERP Implementation Contingency, wherein the funds may only be released after review and approval of the Finance/Government Services and Operations Committee.

I further move that staff present to the Finance/Government Services and Operations Committee monthly status reports based on cost, schedule and technical milestones, with associated variances.

I further move that the Board of Supervisors authorize the Purchasing Agent to increase the contract award authority to AST by \$3,876,595 for a total of \$24,926,659.

**OR**

2. I move that the Board of Supervisors direct staff to prepare budget adjustments which appropriate unallocated FY 2013 General Fund balance as follows:
  - a. \$1,679,999 for Phase 1 Enterprise Resource Planning (ERP) project requirements;
  - b. \$226,281 for 4.00 FTE in the Department of Management and Financial Services for ongoing operational, maintenance and technical support of the various modules implemented in Phase 1 of ERP; and
  - c. \$8,481,314 for the delay of Phase 2 implementation and requirements assessment in a contingency account.

I further move that the Board of Supervisors authorize the Purchasing Agent to increase the contract award authority to AST by \$3,876,595 for a total of \$24,926,659.

**OR**

3. I move that the Board of Supervisors direct staff to prepare budget adjustments which appropriate unallocated FY 2013 General Fund balance as follows:
  - a. 1,679,999 for the Phase 1 Enterprise Resource Planning (ERP) project requirements; and

b. \$226,281 for 4.00 FTE in the Department of Management and Financial Services.

I further move that the Finance/Government Services and Operations Committee recommend that the Board of Supervisors direct Phase 2 of the ERP implementation be terminated.

I further move that the Board of Supervisors authorize the Purchasing Agent to increase the contract award authority to AST by \$3,876,595 for a total of \$24,926,659.

**OR**

**4.** I move an alternate motion.

**ATTACHMENTS:**

1. Project Plan and Milestones
2. Benefits of the ERP System
3. ERP Requirements: Cost Detail Table



ATTACHMENT 1 Project Plan and Milestones - PHASE 1

Item	ORACLE Phase 1 Post Production Support	FGSO Approval Needed	Time
1	<b>FGSO Meeting</b>	<b>\$ 1,906,279</b>	<b>25-Nov-2013</b>
2	Oracle Analytics Development	\$ 125,000	1-Dec-2013
3	Technical Training	\$ 80,000	15-Dec-2013
4	Oracle Analytics Training	\$ 25,000	15-Dec-2013
5	Oracle Analytics Enterprise licenses	\$ 409,835	15-Dec-2013
6	Annual Maintenance for Analytics	\$ 90,164	15-Dec-2013
7	Patch Management Software	\$ 100,000	15-Dec-2013
8	Configuration Management Software	\$ 100,000	15-Dec-2013
9	AST Managed Services	\$ 750,000	2-Jan-2014
10	Staffing for Phase 1	\$ 226,280	6-Jan-2014
	<b>Total</b>	<b>\$ 1,906,279</b>	

ATTACHMENT 1 Project Plan and Milestones - PHASE 2

Item	ORACLE Phase 2 Milestones	Base Contract Costs	Additional Costs	FGSO Approval Needed	Time	Milestone Complete and Work Product produced
1	<b>FGSO Meeting</b>			<b>\$ 444,981</b>	<b>25-Nov-2013</b>	
2	Build out Co-Location Space		\$ 100,000		1-Dec-2013	
3	Pre-implementation Training [1/3 of \$500K]		\$ 166,667		1-Dec-2013	Module Specific Functional Training
4	Phase 2 Staff (FTE)		\$ 178,314		1-Dec-2013	
5	<b>FGSO Meeting</b>			<b>\$ 80,000</b>	<b>14-Jan-2014</b>	
6	<b>Critical Path</b> Milestone: Project Charter Complete				27-Jan-2014	Project Charter Document
13	Deliverable #35-Approved Project Schedule	\$ 167,104			30-Jan-2014	Updated Project Schedule
10	Milestone: Project Management Plan Complete				31-Jan-2014	PMP document
7	Milestone: Conference Room Pilot 1 Scenario Packet				3-Feb-2014	Conference Room Pilot 1 [application prototype] documented scenarios
8	Milestone: Preliminary Outgoing Interface Specifications				3-Feb-2014	Interface Specifications document
9	<b>Critical Path</b> Milestone: Updated Requirements Documentation				3-Feb-2014	Updated requirements document
11	Technical Training		\$ 80,000		12-Feb-2014	Technical Training for DIT Staff
12	<b>FGSO Meeting</b>				<b>11-Feb-2014</b>	
14	<b>Critical Path</b> Milestone: Preliminary HR Key Flex field Decision				18-Feb-2014	Preliminary Key Decision Document on HR KFFs
18	Deliverable #39-Development Environment Created	\$ 83,552			20-Feb-2014	Oracle Development environment accessible by developers
19	Milestone/Deliverable #45-Prototype Environment Created	\$ 83,552			27-Feb-2014	Oracle Prototype environment accessible by testers
15	<b>FGSO Meeting</b>			<b>\$ 752,000</b>	<b>11-Mar-2014</b>	
16	Critical Path Deliverable #38-Interface Requirements	\$ 167,104			14-Mar-2014	Interface requirements document
17	Critical Path Deliverable #37-Data Conversion Requirements	\$ 167,104			14-Mar-2014	Data conversion requirements document
21	Doc. Management Implementation		\$ 500,000		9-Apr-2014	Includes SW licenses
22	Winocular interface		\$ 36,000		9-Apr-2014	
23	Laser fiche forms module		\$ 80,000		9-Apr-2014	
24	Laser fiche development		\$ 100,000		9-Apr-2014	
25	OneNeck Storage		\$ 36,000		9-Apr-2014	
27	<b>FGSO Meeting</b>			<b>\$ 627,000</b>	<b>8-Apr-2014</b>	
29	Critical Path Deliverable #41-Interface Functional Design Completed	\$ 167,104			30-Apr-2014	Interface design document
26	Extend Technical Resources		\$ 627,000		1-May-2014	Zillion
30	Critical Path Deliverable #40-Data Conversion Functional Design Completed	\$ 167,104			2-May-2014	Data conversion design document
31	<b>FGSO Meeting</b>			<b>\$ 1,250,000</b>	<b>13-May-2014</b>	

ATTACHMENT 1 Project Plan and Milestones - PHASE 2

Item	ORACLE Phase 2 Milestones	Base Contract Costs	Additional Costs	FGSO Approval Needed	Time	Milestone Complete and Work Product produced
35	Deliverable #53-Test Environment Established	\$ 83,552			9-Jun-2014	Oracle TEST environment accessible by Testers
32	Customizations due to two Business Groups		\$ 500,000		18-Jun-2014	
33	HR/Payroll *CEMLI		\$ 750,000		18-Jun-2014	*CEMLI
34	<b>FGSO Meeting</b>				<b>10-Jun-2014</b>	
37	Deliverable #46-Conference Room Pilot 1 Testing Complete (1)	\$ 208,880			16-Jun-2014	Testers complete scenarios for Conference Room Pilot 1 [application prototype]
38	Critical Path Deliverable #36-Detailed Requirements/Gap Fit Definition	\$ 417,760			17-Jun-2014	Updated requirements and Gap fit definition document
36	<b>FGSO Meeting</b>				<b>8-Jul-2014</b>	
40	Deliverable #47-Testing Strategy and Plan	\$ 83,552			8-Jul-2014	Test Plan documented
43	Milestone: Conference Room Pilot 2 Scenario Packet				16-Jul-2014	Conference Room Pilot 2 [application prototype] documented scenarios
44	Milestone: To Be Process Documents				16-Jul-2014	BPR "to be" processes documented
45	Critical Path Milestone: Approved *CEMLI				23-Jul-2014	Approved list of *CEMLI
42	Deliverable #48-Testing Scripts Developed	\$ 41,776			29-Jul-2014	Test scripts documented
39	<b>Critical Path</b> Milestone: HR Key Flex fields - Final Decision				10-Jun-2014	Final Key Decision Document on HR KFFs
46	Critical Path Milestone/Deliverable #43-Preliminary Functional Design Document Completed	\$ 167,104			5-Aug-2014	Preliminary Functional Design document
48	<b>Critical Path</b> Milestone: Finalize HR Key Flex fields				5-Aug-2014	Final configuration of HR KFFs
41	<b>FGSO Meeting</b>			<b>\$ 250,000</b>	<b>12-Aug-2014</b>	
50	<b>Critical Path</b> Milestone: System Roles & Responsibilities				13-Aug-2014	Document System roles and responsibilities
51	*CEMLI		\$ 250,000		20-Sep-2014	
47	<b>FGSO Meeting</b>				<b>9-Sep-2014</b>	
53	Deliverable #44-Reporting Strategy Complete	\$ 83,552			10-Sep-2014	Reporting strategy document
52	Critical Path Deliverable #42-Customizations Functional Design Completed	\$ 167,104			11-Sep-2014	Customizations functional design document
55	Critical Path Deliverable #52-Conference Room Pilot 2 Complete	\$ 208,880			6-Oct-2014	Testers complete scenarios for Conference Room Pilot 2 [application prototype]
54	<b>FGSO Meeting</b>				<b>14-Oct-2014</b>	
58	<b>Critical Path</b> Milestone: Freeze Configuration				14-Oct-2014	Configuration complete and locked

ATTACHMENT 1 Project Plan and Milestones - PHASE 2

Item	ORACLE Phase 2 Milestones	Base Contract Costs	Additional Costs	FGSO Approval Needed	Time	Milestone Complete and Work Product produced
57	<b>FGSO Meeting</b>			<b>\$ 416,000</b>	<b>11-Nov-2014</b>	
56	Oracle Analytics Development		\$ 125,000		14-Nov-2014	
59	Extend Vivad Tech [PMO]		\$ 291,000		1-Jan-2015	
60	<b>FGSO Meeting</b>			<b>\$ 500,000</b>	<b>9-Dec-2014</b>	
62	Critical Path Deliverable #49-Data Conversion Programs Developed	\$ 208,880			19-Dec-2014	Data conversion programs run in TEST
63	Critical Path Deliverable #50-Interface Programs Developed	\$ 208,880			19-Dec-2014	Interface programs run in TEST
64	Critical Path Deliverable #51-Custom Objects Programs Developed	\$ 125,328			19-Dec-2014	Custom Objects programs run in TEST
20	Extend or Add AST resources to support Loudoun Staff		\$ 500,000		19-Dec-2014	Support data conversion and interface testing
66	Deliverable #55-System Stress Test Complete	\$ 83,552			23-Dec-2014	Testers complete system stress testing
61	<b>FGSO Meeting</b>				<b>13-Jan-2015</b>	
65	Critical Path Deliverable #54-System/Integration Test Complete	\$ 208,880			26-Jan-2015	Testers complete system/integration testing
69	Deliverable #58-Training Environment Established	\$ 41,776			9-Feb-2015	Trainers can access the Training environment
67	<b>FGSO Meeting</b>			<b>\$ 166,667</b>	<b>10-Feb-2015</b>	
70	Critical Path Deliverable #56-User Acceptance Testing Complete (Conditional Acceptance)	\$ 208,880			16-Feb-2015	Users complete acceptance testing
71	Augmented User Training (1/3 of \$500K)		\$ 166,667		18-Mar-2015	
83	Critical Path Deliverable #61-Production Environment Established	\$ 83,552			27-Mar-2015	Production environment is accessible
68	<b>FGSO Meeting</b>			<b>\$ 2,729,667</b>	<b>10-Mar-2015</b>	
80	Deliverable #57-Parallel Testing Complete	\$ 125,328			12-Mar-2015	
82	Deliverable #59-Training Materials Developed	\$ 125,328			16-Mar-2015	Training documents
72	2 AST HR Consultants		\$ 540,000		1-Apr-2015	
73	2 AST Payroll Consultants		\$ 540,000		1-Apr-2015	
74	1 AST iRecruitment Consultant		\$ 84,000		1-Apr-2015	
75	2 AST Benefits Consultants		\$ 540,000		1-Apr-2015	
76	1 AST OTL Consultant		\$ 84,000		1-Apr-2015	
77	AST Managed Services		\$ 750,000		1-Apr-2015	
78	User and Reports Training (1/3 of \$500K)		\$ 166,667		1-Apr-2015	
79	Oracle Analytics Training		\$ 25,000		1-Apr-2015	Reports and Dashboards
84	Critical Path Deliverable #60-Train-The-Trainer Training Deliverable	\$ 83,552			6-Apr-2015	Trainers are trained
85	Critical Path Deliverable #62-Phase 2 Go-Live	\$ 125,328			7-Apr-2015	Users can use Oracle HCM in PROD
81	<b>FGSO Meeting</b>				<b>14-Apr-2015</b>	
86	Deliverable #64-Phase 2 Complete - Retention Released	\$ 626,640			19-May-2015	All major open issues are resolved and system is accepted as complete

ATTACHMENT 1 Project Plan and Milestones - PHASE 2

Item	ORACLE Phase 2 Milestones	Base Contract Costs	Additional Costs	FGSO Approval Needed	Time	Milestone Complete and Work Product produced
87	Deliverable #63-Phase 2 Post Production Support Complete	\$ 83,552			12-Jun-2015	Knowledge transfer is complete and Loudoun staff can support the system
81	<b>FGSO Meeting</b>			<b>\$ 265,000</b>	<b>13-Oct-2015</b>	
88	Oracle Annual Maintenance		\$ 200,000		30-Nov-2015	
89	Vertex		\$ 35,000		30-Nov-2015	Tax Tables
90	Windstar		\$ 30,000		30-Nov-2015	Tax Tables
91	Project Travel for Phase 2 only [deducted \$186K for Phase 3 travel]	\$ 948,764			Entire Implementation	
	<b>Total</b>	<b>\$ 5,753,004</b>	<b>\$ 7,481,314</b>	<b>\$ 7,481,314</b>		

Note:

- 1) The dates reflected above were aligned based on FGSO meetings dates and may be out of chronological order.
- 2) The completion dates above are current best estimates based on the project schedule. Typical project dynamics may require some dates to change without affecting critical path milestones or the final project completion date.

\*CEMLI - Configurations, Extensions, Modifications, Localizations, and Integrations

ATTACHMENT 1 Project Plan and Milestones - PHASE 3

Item	ORACLE Phase 3 Milestones	Base Contract Costs	Time	Milestone Complete and Work Product produced
1	<b>Critical Path</b> Milestone/Deliverable #65 - Updated Project Plan	\$ 33,870	15-Nov-2013	Project Schedule
2	<b>FGSO Meeting</b>		<b>25-Nov-2013</b>	
3	<b>FGSO Meeting</b>		<b>14-Jan-2014</b>	
4	<b>Critical Path</b> Milestone/Deliverable #66 - Detailed Requirements/Gap Fit Definition	\$ 101,610	21-Jan-2014	Gap-Fit Document
5	<b>FGSO Meeting</b>		<b>11-Feb-2014</b>	
6	<b>Critical Path</b> Milestone/Deliverable #67 - System Configuration Design	\$ 67,740	25-Feb-2014	Configuration Design Document
7	Milestone/Deliverable #68 - Customizations Functional Design Completed	\$ 67,740	25-Feb-2014	Functional Design Document
8	<b>FGSO Meeting</b>		<b>11-Mar-2014</b>	
9	Milestone/Deliverable #69 - Prototype Testing Complete	\$ 67,740	12-Mar-2014	Prototype Testing Results
10	Milestone/Deliverable #70 - Testing Scripts Developed	\$ 13,548	26-Mar-2014	Test Scripts for SIT and UAT
11	Milestone/Deliverable #71 - Custom Programs Developed	\$ 67,740	26-Mar-2014	Customizations Developed
12	<b>Critical Path</b> Milestone/Deliverable #72 - System/Integration Test Complete	\$ 54,192	2-Apr-2014	SIT Results and Action Items
13	<b>FGSO Meeting</b>		<b>8-Apr-2014</b>	
14	Milestone/Deliverable #74 - Training Materials Developed	\$ 33,870	21-Apr-2014	Training UPKs and documentation
15	<b>Critical Path</b> Milestone/Deliverable #73 - UAT Complete (Conditional Acceptance)	\$ 67,740	23-Apr-2014	UAT Results and Action Items
16	<b>Critical Path</b> Milestone/Deliverable #75 - Train-The-Trainer Training Delivered	\$ 33,870	29-Apr-2014	Train the Trainer
17	Milestone/Deliverable #76 - Production Environment Established	\$ 13,548	6-May-2014	Create Production Environment
18	Milestone/Deliverable #77 - Phase 3 Go-Live	\$ 33,870	9-May-2014	Go Live!
19	<b>FGSO Meeting</b>		<b>13-May-2014</b>	
20	<b>FGSO Meeting</b>		<b>10-Jun-2014</b>	
21	Milestone/Deliverable #78 - Phase 3 Post Production Support Complete	\$ 20,322	8-Jul-2014	Post Production Support Complete
22	Milestone/Deliverable #79 - Phase 3 Complete - Retention Released	\$ 101,610	8-Jul-2014	Retention Released
23	Travel	\$ 186,000		Travel
24				
25	<b>Total</b>	<b>\$ 965,010.00</b>		

## ATTACHMENT 2

### **BENEFITS OF THE ENTERPRISE RESOURCE PLANNING (ERP) SYSTEM**

The ERP is a long term investment that will support the growth and complex business needs of Loudoun for the next 20 years. It will provide both the County and Schools with an operational and business system that is fully- integrated, web-based and centralized. ERP integrates Human Resources, Payroll and Financial functions. A fully-integrated system provides the ability to link positions with salary, benefits and non-personnel for a more holistic review of operations and costs. While challenging during the initial stages of implementation, as staff becomes accustomed and more knowledgeable with the new business processes, more and greater detailed information will be available. This provides for a better basis for decision-making by staff and leadership. In fact, data becomes available “at your fingertips” through the use of the dashboard. Rather than waiting for monthly reports or a report that in the past was generated through support from DIT, standard reports and customized reports can be made available and available at the desktop. The ERP places more data at the hands of end users for quicker access and ability to make decisions or provide responses to management and/or citizens. Real time data coupled with improved reporting functions allows for more and better analysis of information. Standardization enables organizations to improve business process efficiencies across human resources, finance and procurement and increases responsiveness to demand for information leading to better more effective decision-making.

**Automated time and attendance system.** Currently processing payroll requires 2 paper processes, which exposes the County to a high risk of error. The new ERP system:

- Eliminates paper timesheets—and its associated duplication of effort and time
- Improves data accuracy through centralized electronic records

**Creating and reporting real-time data.** Places more reporting power in the hands of end-users through ad-hoc report generation. This:

- Allows the Board and management to make more-informed decisions.
- Decreases reliance on DIT to generate reports.
- Accelerates the turn-around time to get information to staff and the public.
- Allows management to more effectively track progress and performance; and plan for the future.

**Improved workflow management.** Provides a secure method to electronically manage document routing and approval between users and departments. This:

- Eliminates the need for physically moving and approving hardcopy paper documents through the system.
- Maintains and tracks historical data for validation and audits.

**Self-Serve employee function.** Allows employees to view and maintain their personal employment-related information electronically. This:

- Increases the security of sensitive personal information
- Increases information reliability by reducing opportunities for error
- Provides convenience to employees and saves processing time
- Maintains and tracks historical data for validation, disputes, and audits in a reliable and secure way.

### Top 10 Business Concerns addressed by the ERP

Business Concern	Resulting Problems	ERP Solution
<b>Operational reports</b> are difficult to use and prone to error	<ul style="list-style-type: none"> <li>- Time delays and poor customer service</li> <li>- Frequent DIT intervention</li> <li>- Operational data underutilized or not available</li> </ul>	Gives users ability to create meaningful reports on scheduled and ad-hoc basis, using real-time data, through the ERP reporting dashboard
<b>Adequate transaction histories</b> are not maintained	Hampers research required to resolve inquiries in a timely and efficient manner	Maintains and tracks wide range of historical data
<b>Tax revenue systems inadequate</b> , as can neither consolidate taxes owed by a family/business nor the ability to show both past-due balances and new amounts owed on a single billing statement	<ul style="list-style-type: none"> <li>- Duplication of staff effort and tax records</li> <li>- Increased errors in account information</li> <li>- Confusion for tax payers</li> </ul>	Will allow cashiers, clerks and customers to accurately make payment and avoid return visits
<b>Incompatible with modern financial-management practices</b> , including using actual debits and credits, rather than financial transaction codes	Research and posting of journal entries is unnecessarily time consuming, difficult to understand and costly	Combines modern processes and practices for entering and storing financial systems data with improved reporting and research features for data retrieval
<b>Daily DIT intervention is required</b> to complete business processes in most systems	Promotes inefficiency, causes costly time delays, compromises data quality, and additional work	Allows users to complete business processes in a timely fashion and without DIT assistance.
<b>Many basic features not supported</b> by current systems	Requires extensive 'workarounds' in Excel and Access to complete processes and provide basic, essential information	Includes modern features and allows for greater flexibility--negating the need for inefficient work-arounds and duplication
<b>No automated workflow management</b> for procurement processing, employee training, or school event management. As well, employees do not have any self-service functionality to maintain their personal or job application data	<ul style="list-style-type: none"> <li>- Paper-based methods and manual data entry</li> <li>- Employees have limited access to their personal information and require staff assistance to make changes</li> </ul>	Uses secure workflow management, eliminating the need for physically moving and approving hardcopy paper documents. Also uses Self-Serve employee function allowing employees to view and maintain their personal employment-related information electronically
<b>Lack of integration between systems</b> to complete financial, tax revenue, and administrative processes	Extensive manual data entry and paper-based methods that are time consuming and contribute to data inconsistency	Fully integrates Human Resources, Payroll and Financial functions into a central-processing system, reducing standalone systems and manual support
<b>The County's mission-critical data and applications are dependent on the mainframe</b>	Training on the antiquated and difficult to use system has become an issue, requiring significant time and resources	The unrealized power of the ERP system will become increasingly evident as users become more experienced and confident with the new system and business processes



**ATTACHMENT 3**  
**ERP Requirements: Cost Detail Table**

Phase 1 and Phase 2 Items (Unfunded Items)*	Estimated Costs	Phase 1	Phase 2
<b>Phase 2 Implementation Support</b>			
Build out Co-Location Space	\$ 100,000	\$ -	\$ 100,000
Extend/Add AST resources, technical and functional to assist with data conversions and interfaces	\$ 500,000	\$ -	\$ 500,000
Subtotal	\$ 600,000	\$ -	\$ 600,000
<b>Technical Development and Customizations</b>			
Changes/customizations due to two business groups	\$ 500,000	\$ -	\$ 500,000
Phase 2 CEMLI and Customizations	\$ 750,000	\$ -	\$ 750,000
Misc. CEMLI	\$ 250,000	\$ -	\$ 250,000
Subtotal	\$ 1,500,000	\$ -	\$ 1,500,000
<b>Post Go-Live Support</b>			
AST Managed Services for Phase 1 functionality for 6 months	\$ 750,000	\$ 750,000	
Retain 2 AST HR Consultants (9 months post PROD)	\$ 540,000	\$ -	\$ 540,000
Retain 2 AST Payroll Consultants (9 months post PROD)	\$ 540,000	\$ -	\$ 540,000
Retain AST iRecruitment Consultant (3 months Post PROD)	\$ 84,000	\$ -	\$ 84,000
Retain 2 AST Benefits Consultants (9 months Post PROD)	\$ 540,000	\$ -	\$ 540,000
Retain AST Time and Attendance Consultant (3 months Post PROD)	\$ 84,000	\$ -	\$ 84,000
Extend Vivad Tech contract for 6 months (thru June 2015) for post	\$ 291,000	\$ -	\$ 291,000
Additional Technical Oracle Resources for 12 months (Zillion)	\$ 627,000	\$ -	\$ 627,000
AST Managed Services for Phase 2 functionality for 6 months	\$ 750,000	\$ -	\$ 750,000
Subtotal	\$ 4,206,000	\$ 750,000	\$ 3,456,000
<b>Training</b>			
Additional Training for HCM [to train up to 15,000 employees]	\$ 500,000	\$ -	\$ 500,000
Technical Training (8 staff, 4 classes, \$5K per)	\$ 160,000	\$ 80,000	\$ 80,000
Oracle Analytics Training	\$ 50,000	\$ 25,000	\$ 25,000
Subtotal	\$ 710,000	\$ 105,000	\$ 605,000
<b>Reports</b>			
Oracle Analytics Report Development (AST)	\$ 250,000	\$ 125,000	\$ 125,000
Subtotal	\$ 250,000	\$ 125,000	\$ 125,000
<b>Documents Management</b>			
Document Management Software/Implementation	\$ 500,000	\$ -	\$ 500,000
Winocular interface	\$ 36,000	\$ -	\$ 36,000
Laserfiche forms module	\$ 80,000	\$ -	\$ 80,000
Laserfiche custom development	\$ 100,000	\$ -	\$ 100,000
Subtotal	\$ 716,000	\$ -	\$ 716,000

**ATTACHMENT 3**  
**ERP Requirements: Cost Detail Table**

Phase 1 and Phase 2 Items (Unfunded Items)*	Estimated Costs	Phase 1	Phase 2
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**Licensing and Maintenance**

Oracle Analytics Enterprise licenses. ( Modules: Financial, HR, Procurement and Spending, Project).	\$ 409,835	\$ 409,835	\$ -
Annual Maintenance for Analytics	\$ 90,164	\$ 90,164	\$ -
Oracle Annual Maintenance (If Phase 2 is completed by 11/2015, Patch Management Software	\$ 200,000	\$ -	\$ 200,000
Configuration Change Management Software	\$ 100,000	\$ 100,000	\$ -
Vertex (If Phase 2 is completed by 11/2015, these costs would be	\$ 35,000	\$ -	\$ 35,000
OneNeck Storage	\$ 36,000	\$ -	\$ 36,000
Windstar (If Phase 2 is completed by 11/2015, these costs would be	\$ 30,000	\$ -	\$ 30,000
<b>Subtotal</b>	<b>\$ 1,000,999</b>	<b>\$ 699,999</b>	<b>\$ 301,000</b>

**Staffing for Phase 1 and Phase 2**

Staffing for Phase 1 and Phase 2	\$ 404,594	\$ 226,280	\$ 178,314
<b>Subtotal Staffing</b>	<b>\$ 404,594</b>	<b>\$ 226,280</b>	<b>\$ 178,314</b>
<b>Total Additional Resources Required for Phase 1 and Phase 2</b>	<b>\$ 9,387,593</b>	<b>\$ 1,906,279</b>	<b>\$ 7,481,314</b>

**\*Full year funding for 7.0 FTE is \$766,097. Full year funding for Phase 1 FTE is \$427,454.**